

US/Ireland Emerging Technologies Conference

October 19-20, 2009
www.uml.edu/EmergingTech

Cutting-edge Research in Nanomanufacturing, Biopharmaceuticals and Medical Devices

Register Before
September 18th,
and Save \$50
on the \$350
Conference Fee!

Announcing a two-day international Emerging Technologies Conference on Nanomanufacturing, Biopharmaceuticals and Medical Devices. Speakers from government, industry and academia will come together to present cutting-edge advances in:

- > Biopharmaceuticals and Bioprocessing
- > Medical Device Technologies
- > Nano/Biosensors
- > Nanomanufacturing Technology for Bio/Medical Applications

Discover how to commercialize and capitalize on these emerging technologies and turn them into real-world applications. Recent advances in innovative technologies address critical issues in the manufacturing and deployment of new products.

Speakers at the conference will include scientists from the University of Massachusetts, Dublin City University (Dublin, Ireland), Queen's University (Belfast, Northern Ireland), Northeastern University and other industry presenters.

Conference Location

UMass Lowell Inn &
Conference Center
50 Warren Street
Lowell, MA 01852

To Register...

Contact UMass Lowell at
EmergingTechnology@uml.edu
or 978-934-2405.

**For more information, please visit
www.uml.edu/EmergingTech or contact us at
[EmergingTechnology@uml.edu.](mailto:EmergingTechnology@uml.edu)**



See reverse...

Conference Sessions

Monday, October 19, 2009

BIOPHARMACEUTICALS AND BIOPROCESSING

A changing regulatory environment and the introduction of biosimilars has put pressure on biopharmaceutical manufacturers to lower production costs and refocus on product quality. These Biopharmaceuticals and Bioprocessing sessions will cover innovative production, purification, and analytical technologies that will help biomanufacturers solve these challenging industry conditions.

Innovative Technologies in the Manufacture of Biopharmaceuticals

Carl W. Lawton, Director, Massachusetts Biomanufacturing Center, University of Massachusetts Lowell

Ireland's Center for Bio Analytical Sciences: A Biopharmaceutical Perspective

Richard O'Kennedy, Professor of Biological Sciences, School of Biotechnology and National Centre for Sensor Research, Dublin City University, Dublin, Ireland

Probing Peroxidase with New Tools and Old

Ciarán Fagan, Dublin City University

Bone Substitute Materials

Dr. Nicholas Dunne, School of Mechanical & Aerospace Engineering, Queen's University

Tailoring Resorption Rates of Biodegradable Polymers

Dr. Fraser Buchanan, Reader, School of Mechanical & Aerospace Engineering, Queen's University

MEDICAL DEVICE TECHNOLOGIES

Medical devices have emerged as an innovative and profitable area of research and development. The key to commercialization of novel medical devices is transitioning from a research lab through design, manufacturing, business formation and FDA/clinical approval. These Medical Device Technologies sessions will cover novel devices, MedTech start-ups, novel processing and tissue engineering, as well as clinical trials for medical devices.

Novel Medical Devices from Massachusetts Start-ups

Stephen McCarthy, Co-Director M2D2, University of Massachusetts Lowell

Supercritical Fluid Assisted Processing of Polymers for Medical Use

Peter Hornsby, Queen's University

A Flexible Method for the Preparation of Tissue Engineering Scaffolds

Daniel Schmidt, Assistant Professor of Plastics Engineering, University of Massachusetts Lowell

Overcoming the Challenges of Clinical Trials for Medical Devices

Sheila Noone, Associate Vice Provost for Clinical Research, University of Massachusetts Worcester

Multifunctional Additives for Medical Polymers

Tony McNally, PhD, Queen's University

Extrusion Processing of Materials for Medical Applications

Gerry McNally, Queen's University

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Tuesday, October 20, 2009

NANO/BIOSENSORS

These sessions will present novel, innovative nanotechnology-based sensors aimed at point-of-care medical diagnostics, environmental monitoring, and chemical detection (including explosives). A variety of sensor platforms will be discussed, including antibody-based, living-cell-based, and electrical and optical property-based devices.

Sensors for Chemical and Biological Threats

James E. Whitten, University of Massachusetts Lowell

Advanced Polymer Microfabrication for Biomedical Diagnostics Platforms

Professor Jens Duree, Dublin City University

Novel Biosensor Platforms for Medical Diagnostics

Professor Brian McCraith, Dublin City University

In-vivo Multi-Biomarker Nano-Biosensor

Ahmed Busnaina, Northeastern University

The Nanocanary: A Living Cell Biosensor for Environmental Monitoring

Professor Susan Brauhut, Biological Sciences, University of Massachusetts Lowell

Optical Fiber Sensors for Bioapplications

Xingwei Wang, Electrical and Computer Engineering, University of Massachusetts Lowell

NANOMANUFACTURING TECHNOLOGY FOR BIO/MEDICAL APPLICATIONS

The transfer of nanoscience accomplishments into useful technology is severely hindered by a lack of understanding of the barriers to nanoscale manufacturing. Nanotechnology-based commercial products cannot be realized without first understanding how one can assemble and connect trillions of nanoelements, how to prevent failures and avoid defects, and how to develop responsible manufacturing processes. Speakers will present on recent micro and nanomanufacturing developments with focus on biological and medical applications.

Directed Assembly of Polymer Blends as Platforms for Bio/Medical Devices

Dr. Joey L. Mead, Deputy Director, NSF Center for High-rate Nanomanufacturing and Co-Director Nanomanufacturing Center at UML, University of Massachusetts Lowell

Processing and Performance of Polymer-clay Nanocomposites: Implications for Processability and Performance in Medical Devices and Packaging

Dr. Eileen Harkin-Jones, School of Mechanical & Aerospace Engineering, Queen's University

BioModular Multi-Scale Systems

Dr. David Kazmer, Professor, University of Massachusetts Lowell

Molding Microstructures for Medical Applications

Dr. Carol Barry, Associate Director, NSF Center for High-rate Nanomanufacturing and Co-Director Nanomanufacturing Center at UML, University of Massachusetts Lowell

On-Line Monitoring of Nanocomposite/Biomaterial Compounding for Process Optimization

Dr. Marion McAfee, School of Mechanical & Aerospace Engineering, Queen's University

Issues in Commercialization of Nanotechnology

Panel Discussion